Baer (B. F.)

With the Compliments of the Author.

AN ANALYSIS

OF

TWENTY-SEVEN OPERATIONS

FOR THE

RESTORATION OF THE LACERATED CERVIX UTERI,

WITH SPECIAL REFERENCE TO THE EFFECT OF THE OPERATION ON FERTILITY AND LABOR.

Read before the Obstetrical Society of Philadelphia, February 1, 1883.

BY

B. F. BAER, M.D.,

INSTRUCTOR IN GYNÆCOLOGY IN THE POST-GRADUATE SCHOOL OF THE UNIVERSITY OF PENNSYLVANIA; OBSTETRICIAN TO MATERNITY HOSPITAL; VICE-PRESIDENT OF THE OBSTETRICAL SOCIETY OF PHILADELPHIA, ETC.

[*Reprinted from* THE MEDICAL NEWS, *February 24, 1883.*]

PHILADELPHIA.

1883.

AN

ANALYSIS OF TWENTY-SEVEN OPERATIONS

FOR THE

RESTORATION OF THE LACERATED CERVIX UTERI, WITH SPECIAL REFERENCE TO THE EFFECT OF THE OPERATION ON FERTILITY AND LABOR.

In the discussion which followed the reading of Dr. Playfair's paper on "Trachelorrhaphy, or Emmet's Operation," before the Obstetrical Society of London, on March 1, 1882, Dr. Herman, in the course of his remarks, said that "The American literature on the subject consisted mostly of general statements. Few writers had published cases, and the cases were mostly complicated ones." There is some force in these words. But, to avoid a monotonous repetition, it is desirable only to publish such as are strongly illustrative of the class to which they belong, or such as bear directly upon any point which may be under discussion.

In the *American Journal of Obstetrics*, for January, 1883, Dr. P. J. Murphy, of Washington, D. C., makes some "Observations on the Effects of Trachelorrhaphy on Fertility and Parturition," and comes to the conclusion "That repair of lacerations of the cervix uteri is usually followed by sterility." Now, there is no doubt of the truth of this statement, so far as it goes,

but I think he ought rather to have said that, in those cases in which sterility followed the operation, that condition also preceded the repair of the cervix in the majority of instances, either as a result of the laceration itself, or of its effects on the uterus and its appendages; and that the operation was not the cause of the sterility, but that it simply failed to cure it.

The only way to arrive at anything like a correct conclusion on this subject, is to take a number of cases (it need not be large), and analyze them, and this I purpose doing with mine.

Of the twenty-seven cases in which I have made the operation, six were either widows, or had reached or passed the menopause, and must therefore be excluded from the analysis. This leaves twenty-one cases to be reported upon in this inquiry. Of these twenty-one cases, thirteen had been sterile from five to sixteen years previous to the operation, and I think, for reasons which I will give farther on, that they ought also to be classed as beyond the probability of becoming pregnant. In the remaining eight cases, pregnancy had occurred within five years, but had resulted in abortion in five. In twelve of the twenty-one cases, from one to five abortions had occurred in each subsequently to the occurrence of the laceration. This gives abundant proof of the ill-effects of the lesion and its results, subinvolution, chronic hypertrophy, cellulitis, oöphoritis, etc., on fertility.

Is the assertion that sterility usually follows, as a result of the operation, correct? I do not think so; provided, of course, that the operation was properly made, that the os was not made too small, and that immediate union followed the coaptation of the parts, so that there was left the minimum amount of cicatricial tissue to interfere with the normal resiliency of the cervix.

The oftener abortion occurs, as a rule, the greater and more persistent will be the histological changes in

the uterus and its appendages, which finally result in sterility.

The majority of cases in which the operation has been made have been of long standing, because the operation is new, and there were many old cases of so-called "ulceration" with chronic hypertrophy, waiting ready to be experimented upon with this as they had been before with many other old and new remedies.

Is this last new remedy followed by any greater success than the old in the reduction of the size of a large uterine body, which has become hard and fibrous from connective-tissue hyperplasia? I think not; and hence its failure to cure sterility of long standing, from this cause. But, for the cure of certain cases of hypertrophy of the cervix, inflammation, ectropion and abrasion of the mucous membrane, with their local and remote symptoms, and possibly, even probably, preventing epithelioma, and in the more recent cases for the cure of subinvolution, abortion, and sterility, the operation is an immense stride in advance of the old way of destroying the tissues of the cervix by amputation, or by the application of the hot iron or the potential cauteries. It is an advance, because it restores the cervix instead of destroying it.

The following case proves, I think, that abortion may result from laceration of the cervix, although none of the usual inflammatory consequences of the lesion are present.

Case I.—Mrs. M. L., æt. 30, consulted me in January, 1881. She was delivered of her first child two years previously. The labor was rapid. The child was fully developed and vigorous. There was nothing unusual in the puerperal period, and she seemed to be well. Ten months after the birth of the first child she became again pregnant. Between the second and third months of gestation the product of conception was ex-

pelled with little pain, but it was followed by severe hemorrhage. Within three months she was again pregnant, and aborted at about the same time and manner as previously. This was followed within six months afterwards by a third pregnancy, and abortion under similar circumstances. The last occurred about two months before she consulted me. She had absolutely no symptoms of uterine disease, such as leucorrhœa, menorrhagia, and the pain which always results from congestion and hypertrophy of the uterus; and expressed herself as feeling as well as ever she had in her life. There was no evidence, whatever, of syphilitic infection, either in the patient herself or in her husband. They are both robust and well developed.

Examination.—The perineum and vagina were normal. The uterus was in normal position; it was neither congested nor enlarged; but the cervix was lacerated on the left side to a point beyond the vaginal attachment, apparently approaching and involving the fibres of the internal os. On the right side there was a mere fissure only. There was no hypertrophy, eversion, or abrasion of the mucous membrane. The sound passed to a depth of two and a half inches. I expressed the opinion that the lacerated cervix and the abortions stood in the relation of cause and effect; and I advised an operation for the restoration of the torn cervix.

On March 10, 1881, I denuded the surfaces, being careful to remove very little tissue, and to freshen the edges as far up towards the internal os as possible. I then placed six carbolized catgut sutures, and clamped them with shot. I used the gut suture here in preference to the silver wire, because, as the cervix was not large, and the tear principally unilateral, there would not be much tension, and for the additional reason that I especially did not want any cutting of the tissues by the sutures, which is more apt to occur when wire is used. Another advantage of gut suture is that the

line of union need not be disturbed by the removal of the stitches. On the seventh day after the operation I inspected the cervix through Sim's speculum, and found the sutures all *in situ*, though they were partially absorbed. Union was perfect. Two days afterwards the shot were lying loose in the vagina. There had not been the slightest discharge from the united surfaces since the operation.

On June 3, 1881, the patient reported that she had not menstruated for seven weeks, and there was every indication that she was pregnant. A week later I was requested to visit her. I was much chagrined to find when I arrived that she had aborted. This was very discouraging, but I found some comfort in the character of this abortion. More pain attended the expulsion, and less hemorrhage followed it than on the previous occasions. This I ascribed to the restoration of the symmetry of the cervix, and its better retentive power.

On October 9, 1881, she reported that she was about two months pregnant, and feeling well; and on May 7, 1882, she was delivered at full term of a fully developed healthy boy, after a perfectly normal labor of six hours' duration. Examination two months afterwards revealed not the slightest laceration of the cervix. The mother and child are both well.

Case II.—Mrs. M. R., æt. 21 years, consulted me in May, 1878. She had been delivered eight months before of her first child; the labor being tedious, was terminated with the aid of the forceps. The puerperal period was also tedious, and she had ever since been troubled with pain in the hypogastric and lumbar regions, together with a profuse leucorrhœa. Coition was painful, and followed by slight hemorrhage. She was anæmic, and had lost flesh.

Physical Exploration.—The perineum was slightly lacerated and the vagina relaxed. The cervix uteri

was pressing low down on the pelvic floor, and lacerated bilaterally, but to a greater degree on the left than on the right side. The tissues were soft from engorgement, and the mucous lining of the cervical canal greatly hypertrophied, everted, and abraded of its epithelial covering, so that it bled on the slightest touch. The uterine body was likewise congested and tender, The sound gave a measurement of minus three inches.

I treated this patient locally and constitutionally for almost a year, with marked general improvement, and although the local condition would improve, the benefit was only temporary. On April 30, 1879, I made the operation for lacerated cervix, placing seven silver sutures. Perfect union resulted.

Three months after the operation she became pregnant, and was delivered spontaneously at full term, The labor was so easy that delivery occurred before the arrival of the physician. Two months after the labor she called at my office, at my request, and I found the cervix healthy, although there was a very slight fissure on the left side. She stated that she had been well since the operation.

Case III.—Mrs. A. B., æt. 34 years, was sent to me in July, 1880. She had had eight children, the youngest of which was six months of age. She stated that she always menstruated during lactation, and became pregnant when her children were about eight months old. Since the birth of the last child, she had had metrorrhagia every three weeks, lasting one week, and a profuse leucorrhœa for years. She complained of pain in the lumbar region, with a heavy dragging sensation in the pelvis and on the top of the head. She was emaciated, and so pale that she appeared bloodless. She had become hysterical.

Touch.—The perineum and vagina were very much relaxed. The cervix uteri was far back, and presented

a nodular surface, the result of three deep rents in its tissue, one of them extending through the centre of the anterior lip, flush with the vaginal junction. There was marked ectropion of the mucous membrane, with abrasion. The body of the uterus was anteverted, and only slightly larger than normal.

I placed this patient upon the "rest treatment" of Dr. S. Weir Mitchell (modified somewhat to suit the circumstances), in addition to the necessary local treatment. Her improvement was very marked, and on October 10, 1880, three months after she first came under my care, I operated for the laceration, and secured immediate union.

Under the date of October 27, 1881, a year from the date of the operation, I find this note in my case-book: "Returns to-day at my request for examination. She has improved so much in appearance that I scarcely knew her, and she states that she has been well since a short time after the operation. The cervix is perfectly normal, and gives no evidence that an operation has been made."

I recently received from my friend, Dr. Wm. L. Taylor, the following note concerning this lady:

"DEAR DOCTOR: In answer to your inquiry regarding Mrs. B., I will state that she was confined six weeks ago. The labor was natural, and if it differed in any way from her former labors, it was more rapid. I examined the cervix to-day, and found the external os patulous, but no laceration."

Case IV.—Mrs. X., æt. 35, who had had seven children and two abortions, the last one nine months before, was sent to me in September, 1880. She complained of pain in the lumbar region, a heavy dragging pain in the pelvis, and very difficult and painful locomotion. These symptoms had been growing in severity for

several years. She also had menorrhagia and leucorrhea.

Touch: Cervix large, soft, and lacerated bilaterally flush with the vagina. Mucous membrane engorged, everted, and eroded. Uterus retroverted but mobile. The sound passed three and a half inches.

On February 27, 1881, I closed the rent, placing seven sutures; union immediate. The result on the symptoms was all that could be desired. A letter received a few days ago, in anwer to one of inquiry from me, informed me that this lady is now pregnant.

Here are four cases, in which pregnancy followed the operation, out of the class of eight in which impregnation had occurred within five years previous to the restoration of the cervix. And that there will be more I feel sure, because a sufficient time has not yet elapsed since the operation was made, in some of my cases, to prove that sterility will continue.

That sterility does not result as a consequence of the operation, when the proper precautions are taken to secure immediate union and a normal-sized os, does not this analysis prove? That it will prevent a recurrence of abortion, and cure sterility of recent date, Cases I. and II. give undoubted evidence. That it will fail to cure sterility of long standing, for reasons given in this paper, I am convinced from my own experience. Time, however, may prove that a small percentage of this class will also be benefited in this direction.

I have selected the following case from the class of thirteen in which sterility had existed more than five years prior to the operation, as strongly typical of the point I wish to illustrate, viz., that the longer the time which has elapsed between the occurrence of the injury and its repair (pregnancy being absent during this time), the greater and more permanent will be the changes in and about the uterus, which almost neces-

sarily result in a continuance of the sterility after the cervix has been restored.

Case V.—Mrs. M. R., æt. 39, consulted me in the fall of 1880. She had had six children, the last one thirteen years before. Her labors were all normal, so far as she knew, except the last. This was complicated by a malposition. The forceps were applied two hours before the termination of the labor, and great traction effort was necessary. The child was so injured by the forceps that it died on the third day after delivery. The patient was unable to be out of bed for nearly three months afterwards, and the bloody lochia continued during two months. She had suffered from menorrhagia ever since, and recently from metrorrhagia every two weeks, at times amounting to "almost a flooding." In the intervals between the hemorrhages, she had a constant and profuse mucous leucorrhœa. She complained of a deep-seated pain in the pelvis, "sawing" in character, with pain in the sacral and lumbar regions and across the shoulders. Coition could not be tolerated because of the pain it induced, and the hemorrhage which resulted.

Examination.—The perineum showed an old laceration of slight extent, and within an inch of the vaginal orifice the finger came upon a large mass of tissue which filled and distended the tube. It was hard and nodular around its border, but softer and rather friable in its centre; and it bled on the slightest touch. It gave me, at first, an impression of epithelioma, and I could readily detect that the cervix was bilaterally lacerated down to the vaginal attachment. The body of the uterus was hypertrophied, indurated, retroverted and slightly fixed from contraction of the broad ligaments. Through the speculum the cervix was seen to be lacerated, as the finger had indicated, and that the softer tissue, which occupied the space between the

separated lips, was redundant mucous membrane, which seemed to have united from side to side, leaving a very small opening in the centre, corresponding to the external os. This tissue was dotted all over its surface with whitish spots—Nabothian cysts. The sound passed to a depth of minus four inches, and showed the uterine cavity to be rugous—vegetations of the endometrium. I now punctured the retention cysts, and found that the redundant tissue between the torn and separated lips was riddled with them. So much hemorrhage resulted from the scarification that, to check it, I was finally compelled to tampon the vagina. On the next day I removed the tampon, and found the mucous membrane much reduced and less congested.

I treated this lady during a number of months for the purpose of relieving symptoms, and preparing the parts for an operation on the cervix. The hypertrophy and congestion of the mucous membrane of the cervix and uterine cavity were considerably reduced, the metrorrhagia and leucorrhœa diminished. The uterus became more mobile, and tenderness subsided; but the parenchyma of the cervix and body of the uterus remained sclerotic and unreduced in size.

On February 10, 1881, I closed the rent after denuding the surfaces, and dissecting away a large amount of cicatricial tissue from the sides and angles. I placed eleven silver sutures. Considerable difficulty was experienced in passing the needles through the dense and tough cervix, and I broke and bent several before I succeeded in placing all the stitches. The surfaces did not unite as readily in this instance as is desirable, but union was finally established by granulation, resulting in the formation of a good cervix.

This patient has been entirely relieved of the leucorrhœa and pain of which she complained, but she still has an occasional menorrhagia, and the body of the uterus remains large and hard, the sound entering

three and a half inches. As was to be expected under these circumstances, she has remained sterile, but certainly not as a result of the operation.

Dr. Murphy further says: "I fear I shall never arrive at that perfection where it will be given me to appreciate why a laceration of the cervix, by being repaired, will probably prevent cancer of the womb."

I do not wish to discuss this subject here, as I am preparing a special paper upon it, but I would like to say that, if we believe that cancer may develop in consequence of the changes in the circulation and nutrition, which necessarily follow when the cervix is torn, and it seems to me that one need not have arrived at perfection in the art of appreciation to believe that cancer might develop in a field such as was presented in Case V. previous to the operation, then restoration of the organ ought to prevent cancer.

He also concludes, "That the character of the labor is unusually severe and protracted, and that, in a large percentage, laceration occurs a second time."

That this statement is too sweeping is abundantly proven by the cases I here record. I can believe, where pregnancy has happily followed the operation in a case of long standing, in which the cervix is sclerotic from connective-tissue hyperplasia, and cicatricial from non-occurrence of immediate union, that the first stage of labor might be tedious, and that relaceration might take place. But, suppose relaceration does occur in some cases, is that sufficient reason to deprive the patient of the benefits which usually accrue from the operation independent of pregnancy?

Not long ago I made the operation for the restoration of a lacerated perineum, which extended fully an inch and a half up the recto-vaginal septum, on the person of a lady fifty-one years of age. The laceration occurred twenty-six years before with a severe forceps labor. She had been debarred from the society of her friends, and made loathsome to her husband as well

as to herself all these best years of her life. In answer to my inquiry why she had not sought relief long before, she replied that she had done so, but that she had been advised to wait until after the menopause for fear that, in the event of another parturition, the parts would relacerate! Comment on such argument as that is unnecessary.

The comfort which this lady has enjoyed since the rectum and perineum have been restored, causes her to feel far from kindly towards the gentlemen who advised such conservatism.

I have recently delivered two ladies on whom the operation for lacerated perineum was made about three years ago, one by Dr. Goodell, and the other by myself. Relaceration did not occur in either.